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10/519,112	12/23/2004	Ole Kaae Hansen	P70305US0	9507

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EXAMINER

CLARK, AMY LYNN

ART UNIT	PAPER NUMBER
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1655

MAIL DATE	DELIVERY MODE
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07/25/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/519,112

Applicant(s)

HANSEN, OLE KAAE

Examiner

Amy L. Clark

Art Unit

1655

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 04 June 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1, 2 and 4-8.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.


MICHELE FLOOD
PRIMARY EXAMINER

Continuation of 11. does NOT place the application in condition for allowance because: Claims 1, 2 and 4-8 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Oura et al. (A*, US 4,229,483), in view of Noller (U*, Ann Rev Biochem. 1945; 14: 383-406) and Vogel et al. (V*, "Fermentation and Biochemical Engineering Handbook-Principles, Process Design and Equipment (2nd Edition)").

This rejection is maintained for reasons of record set forth in the paper mailed on 30 March 2006 and repeated below, slightly altered to take into consideration Applicant's amendment filed on 04 June 2007.

Applicant's arguments have been thoroughly considered, but the rejection remains the same for the reasons set forth in the previous Office action and for the reasons set forth below.

Oura teaches a method of preparing an aqueous extract of fine shea nut meal (please note that shea nut meal is a saponin-containing waste product from a shea butter tree and that the shea nut meal is filtered and ground prior to extraction, See column 2, lines 48-51 and lines 55-66) comprising washing the shea nut meal with water, wherein the amount of water is more than 2.5 times as much as volume of the shea nut meal (See column 3, lines 22-24), mixing the shea nut meal with a 10-99% (w/v) aqueous ethanol solution, whereby the alcohol solution may be used in an amount of 0.05 to 5 times as much as the volume of shea nut meal (See column 3, lines 29-30 and 33-35) in the presence of an alkali, wherein the alkali is used in the form of an aqueous solution (See column 3, lines 59-68 and continued into column 4, lines 1-8), which reads on buffer, at a pH of 7.15 or 7.41 (See column 6, table 2) and the solids can be removed by filtration from a liquid medium (See column 7, Example 32). Oura does not expressly teach that the aqueous extract contains saponins, however, saponins are inherent to shea nut press cake (See Noller, page 385), which is synonymous with shea nut meal. Oura further teaches the washing of the shea nut meal can be carried out at a temperature of 10 to 80 °C (See column 3, lines 19-22) and that treatment with an alcohol solution can be carried out a temperature of 10 to 80 °C or by soaking the shea nut meal in the alcohol solution for a period of 30 minutes to overnight (See column 3, lines 30-39). Oura further teaches that the solution can be treated to 100 to 160 °C for a period of 10 to 60 minutes (See column 3, lines 40-45). Oura further teaches that the solution can be filtered under reduced pressure and after cooling the solution, the shea nut meal may be dried and/or ground (See column 3, lines 55-58). Oura further teaches that the shea nut meal treated by heating is present in a solution in an amount of up to 10% by weight, usually in a range of 0.5-5% by weight and may be used in a large amount (See column 5, lines 2-6). Oura further teaches that the coloring composition may be in the form of a powder, pellets, a slurry, an emulsion, an aqueous suspension or the like (See column 4, lines 46-54). Oura further teaches that shea nut meal may be treated with a medium, such as water or aqueous ethanol, wherein the water used is in an amount of more than 2.5 times and 0.05 to 5 times, respectively, the amount of the shea nut meal to be treated (See column 9, claim 1). Oura further teaches that the solution of water and shea nut meal may be subject to heat treatment and the heat treatment may be carried out in the presence of a 1-10% by weight 1N aqueous solution of acid (See column 9, claims 2-4 and continued into column 10).

Vogel teaches that solid liquid separation process can be accomplished by filtration or centrifugation (See page 558). Vogel further teaches that evaporation is the removal of a solvent as a vapor from a solution or slurry and that the demand of an evaporator is to concentrate a feed stream by removing a solvent which is vaporized in the evaporator and, for the greatest number of evaporator systems, the solvent is water and that the "bottoms" product is a concentrated solution, a thick liquor, or possibly a slurry and is most usually the desired and valuable product (See page 476).

The teachings of Oura, Noller and Vogel are set forth above and applied as before. Oura does not teach an incubation step is performed at a temperature of between 15 and 95 °C and over a period of between 10 minutes and 5 hours, nor does Oura teach removing solids by centrifugation, nor does Oura teach obtaining an extract containing at least 1 % by weight dry matter, nor does Oura teach further concentrating the shea nut meal by evaporation. However, at the time the invention was made, it would have been obvious to one of ordinary skill in the art and one would have been motivated and had a reasonable expectation of success to modify the method as taught by Oura to provide the instantly claimed invention because at the time the invention was made, it was known within the art that upon heating the solution, the solution could be separated from the solids and that the shea nut meal solution could subsequently be dried. Therefore, it would have been merely a matter of judicious selection to one of ordinary skill in the art at the time the invention was made to modify the referenced composition because it would have been well in the purview of one of ordinary skill in the art practicing the invention to pick and choose a temperature and time period over which a solution is incubated, to pick and choose a method of obtaining a saponin-rich extract of shea nut meal by separating solids from a liquid solution, to pick and choose an amount of dry matter present in an extract and to pick and choose a suitable method for obtaining or drying (evaporating the solvent from) the shea nut meal extract, as clearly taught by Oura and Vogel. Furthermore, since centrifugation is a suitable alternative to filtration for separating solids from liquids and concentration by evaporation is a suitable method for drying or concentrating a solution, as was well known in the art at the time the invention was made, as clearly taught by Vogel, the claimed invention is no more than the routine optimization of a result effect variable. The result-effective adjustment of particular conventional working conditions (e.g., adjusting the amount of time a solution is incubated, to pick and choose a method of obtaining a solution from solids, to pick and choose the amount of dry matter present in an extract and to pick and choose a method for drying or concentrating an extract) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

Based upon the beneficial teachings of the cited references, the skill of one of ordinary skill in the art, and absent evidence to the contrary, there would have been a reasonable expectation of success to result in the claimed invention.

Applicant argues that the rejection of claims 1-2, and 4-8 as obvious over Oura et al., in view of Noller and Vogel et al. was discussed with the Examiner at length during the interview of May 8, 2007 and the basis of this rejection appeared to be centered on the washing steps disclosed in Oura et al., and the heating step taught in Applicant's claim 1. Applicant further argues that the Examiner was concerned by the description in column 2 of Oura et al., where there is a brief discussion of washing the nutmeal with water and heating in the presence of Applicant's an alkali (col. 2, lines 30-48). With help of table summary, which compared the two distinct processes, and which Applicant included in the previous Response (Response of 8 November 2006, page 12), Applicant's representative was able to show the Examiner that Oura et al. does not perform an extraction with the washing step. Oura et al. wash the ground nutmeal to remove the odor. Applicant further argues that sometimes alcohol solution is used in place of water. Applicant further argues that at no time do Oura et al. add

acid or alkali to the wash water. Applicant further argues that Applicant's representative pointed out during the interview, that the heating step in *Oura et al.* occurs with the dry washed nutmeal, not in the aqueous alkali solution, as is done in Applicant's claimed process and that *Oura et al.* teach that the color of the nutmeal can be darkened by addition of 20 ml of water having potassium carbonate dissolved in it, in 100 g of nutmeal. Applicant's representative indicated to the Examiner that such a small amount of water is not a solution, and that the liquid water is evaporated off with the heating of the nutmeal. Applicant further argues that the fact that the nutmeal itself is the resultant product of the *Oura et al.* process was also pointed out to the Examiner. Applicant further argues In contrast to *Oura et al.*, Applicant's representative showed that Applicants' process extracts the compounds of interest using a large volume of heated aqueous alkali solution (approximately 6 L), and the nutmeal is filtered off and discarded. and that the aqueous solution is then concentrated and the compounds are isolated. Applicant further argues that the fact that the nutmeal is not the product of interest in Applicant's process was stressed in the discussion with the Examiner, because Applicant's method performs the inverse steps, namely, retaining the extraction liquid, and discarding the nutmeal and that the dry nutmeal is not heated. Applicant further argues that in fact, after the initial extraction the nutmeal is discarded in Applicant's application and applicant submits that the Examiner has failed to establish a prima facie case of obviousness with regard to claims 1, 2 and 4-8, because *Oura et al.*, in view of *Noller and Vogel et al.*, do not teach each and every step of Applicant's claimed process.

However, this is not found persuasive because *Oura* does in fact teach that shea nut meal may be treated with a medium, such as water, wherein the water used is in an amount of more than 2.5 times and 0.05 to 5 times, respectively, the amount of the shea nut meal to be treated (See column 9, claim 1). *Oura* further teaches that the solution of water and shea nut meal may be subject to heat treatment and the heat treatment may be carried out in the presence of a 1-10% by weight 1N aqueous solution of acid (See column 9, claims 2-4 and continued into column 10) (Please see the rejection under 103(a) provided above).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Examiner has met the requirement of establishing a prima facie case of obviousness as set forth above and in the previous Office Action.

Therefore, this rejection is maintained for reasons of record and for the reasons provided above.